

REMARKS

In response to the final Office Action of October 27, 2009, and in conjunction with the presently filed Request for Continued Examination, the present application has been carefully reviewed and amended. Entry of the present amendment and reconsideration of the application are respectfully requested.

Claim Rejections under 35 USC §102

Claims 8-18 stand rejected under 35 USC §102 as being anticipated by Krivitski (US Patent 5,453,576) [Paper 20091021, page 2]

In part, the outstanding rejection is maintained "because the disclosed calibration of Krivitski accounts for similar factors to that of the instant application, one must conclude that Krivitski must be considered within the claim scope." [Paper 20091021, page 2-3]

Claims 8-18 have been amended to recite in part, determining the calibration coefficient of the sensor corresponding to  $K = -\frac{V_{Inj}}{V + V_{Inj}} * \Delta U_{Inj}$  where  $V_{Inj}$  is a volume of the dilution indicator;  $V = (Q_B - Q_{UF}) * \Delta T_{Inj}$  where  $Q_B$  is a blood flow rate in the extracorporeal blood circuit,  $Q_{UF}$  is an ultrafiltration rate of a dialysis system connected to the extracorporeal blood circuit,  $\Delta T_{Inj}$  is the transit time of the dilution indicator.

That is, the calibration coefficient of the sensor corresponds in part on (i) the ultrafiltration rate of a dialysis system connected to the extracorporeal blood circuit and (ii) the transit time of the dilution indicator.

Applicant is unable to identify in the cited reference, a calibration coefficient of a sensor corresponding to either of these two factors.

As the cited reference does not disclose each of the limitations set forth in the claims, the amended claims are believed to overcome the outstanding rejection under 35 USC §102. Therefore, applicant respectfully submits Claims 8–18 are in condition for allowance.

#### Claim Rejections under 35 USC §103

Claims 1, 2 and 4–7 stand rejected under 35 USC §103 as being unpatentable over Krivitski (US Patent 5,453,576) [Paper 20091021, page 2]

Claims 1, 2 and 4–7 have been amended to recite in part “determining a calibration coefficient K of the blood property sensor corresponding to the determined blood property of the diluted blood passing the blood property

$$\text{sensor in the venous tubing portion and the relationship } K = -\frac{V_{Inj}}{V + V_{Inj}} * \Delta U_{Inj}$$

where  $V_{Inj}$  is a volume of the dilution indicator;  $V = (Q_B - Q_{UF}) * \Delta T_{Inj}$  where  $Q_B$  is a blood flow rate in the arterial tubing portion,  $Q_{UF}$  is an ultrafiltration rate of the dialysis system,  $\Delta T_{Inj}$  is the transit time of the dilution indicator; and  $\Delta U_{Inj}$  is integrated over  $\Delta T_{Inj}$ .

That is, the claimed calibration coefficient corresponds to (i) the ultrafiltration rate of a dialysis system connected to the extracorporeal blood circuit and (ii) the transit time of the dilution indicator. Krivitski '576 does not disclose determining a calibration coefficient of the blood property sensor, or determining a calibration coefficient of the blood property sensor corresponding to at least (i) the ultrafiltration rate of a dialysis system connected to the extracorporeal blood circuit and (ii) the transit time of the dilution indicator. At least these limitations are absent from Krivitski '576 and preclude Krivitski from sustaining the outstanding rejection.

Therefore, applicant respectfully submits all the pending claims, Claims 1, 2 and 4-18 are in condition for allowance, and such action is earnestly solicited. If, however, the Examiner believes that any further issues remain, the Examiner is cordially invited to call the undersigned so that any such matters can be promptly resolved.

Please grant any extensions of time required to enter this response and charge any required fees to our deposit account 03-3875.

Respectfully submitted,

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